**Affinity Process aka Lump & Clump**

* The group addresses one question or one issue.
* Each participant writes (usually brainstorms) one idea on a sticky note or note card.
* Participants place ideas on chart, wall, or flat space.
* The group categorizes topics and eliminates duplicates.
* Members name each category.

**Brainstorming**

* Free associate.
* List all ideas offered.
* Don't evaluate.
* Don't discuss.
* Repetition is okay.
* Encourage quantity.

**Reverse Brainstorming**

* After a list has been generated, the group studies each item one at a time.
* They brainstorm questions or problems associated with each item.
* Critical criteria and a narrower list evolve.
* Members focus on ideas rather than people.

**BUZZ**

* With a partner, respond to a question or react to a statement (1-2 minutes).

**Carousel Brainstorming**

* Participants form into groups of equal numbers. .• Sheets are posted on wall or at tables.
* The leader writes a topic, question, or extended sentence on the top of each chart.
* Each group stands in front of a chart to brainstorm and write answers. .• At a designated signal, each group moves clockwise to the next chart.
* Afterward, everyone participates in a gallery walk. Participants circulate and read comments and questions.

**Check-In (See Grounding)** (Chadwick, 1989)

* Each person states expectations for the meeting or work session, along with a description about his or her comfort level regarding the work.

**Colored Card Colleagues**

* Provide one colored note card to each person at a table
* Other tables received different colors
* Each table reads a different article and talks about key concepts or examples
* Teams are based on finding a person with different colored note cards. For example, a red, blue and yellow group would form to teach each other about the text.

**Compare and Contrast**

* Participants describe the differences and similarities of two or more things.

**Consensogram**

* A consensogram is used to capture the entire team's views on an issue.
* The facilitator or team constructs a question or statement to which each team member will respond.
* A recording process is developed. For example, a 5 point likert scale might be used to indicate range of agreement to disagreement or a 0-100% scale might be used to show level of support for a proposal.
* A visual display, including the question or statement and a recording matrix, is posted.
* All team members respond to the question or statement by posting a dot or marking an X on the matrix.
* The facilitator and team view the results and dialogue about next steps.

**Criteria Matrix**

* Matrix is used to evaluate possible solutions to a problem. It is based on predetermined or agreed-upon criteria.
* Possible solutions are written across the top of the chart.
* Criteria are written on the left side.
* The group checks whether a solution meets criteria.
* A variation of the matrix is a numbering system, whereby I to 5 are used to rank the level to which criteria meet each possible solution

**Critical Inquiry Process**

* What are we doing now?
* How did the situation come to be this way?
* Whose interests are served by the ways things are?
* What information do we have or need that bears upon the issue?
* What are we going to do about all of this?

**Data Wall**

* Participants post data and information on charts or walls for all to see.

**Diagnosis Scan "Just Like Me"** (Garmston & Wellman, 1999)

* The leader poses a series of questions to participants.
* Participants raise their hands or stand when a statement best represents them.

**Dialogue Journaling**

* The leader poses a question or series of questions to participants.
* Participants respond in writing.
* Facilitator(s) respond back in writing.

**Dip Sticking and Temperature Checks**

* Make sure that everyone understands that this is not a vote or a final decision. It is a "temperature read".
* Summarize the proposal.
* Ask the group members to stand or raise their hand to voice their positions.

**Fault-Tree Analysis**

* It is helpful when the group is focused on why something can't happen.
* List main problem in the trunk.
* List all reasons it cannot be solved in branches.
* Brainstorm solutions to each problem, expanding out to new branches.
* Discuss the better options and action plans.

**Fishbowl**

* Create an inner and outer circle
* Inner circle has four to six chairs. One chair is open
* The group discusses perceptions and issues.
* Members of the outer circle listens and when someone has input, they join the inner circle taking the empty chair
* Conduct follow-up on what the group heard and learned.

**Fist of Five (Decision-Making and Temperature Checks)**

* Take a temperature check by asking a question. Team members show their support as follows: a fist (strongly disagree): one finger (disagree); two fingers (lukewarm); three fingers (beginning to support); four fingers (support); and five fingers (strongly support).

**Focusing Four** (Garmston & Wellman, 1999)

* Brainstorm possible solutions to the problem. Chart them.
* Group helps facilitator eliminate duplicates. Combine similar ideas.
* Group asks clarifying questions to understand each choice.
* Prioritize remaining ideas. Each member spends a number of dollars, points, or dots.
* Represent top choices with the most dol1ars, points, or dots.

**Force-Field Analysis**

* Leader states current situation.
* On the left side, members list driving forces that enhance or support change.
* On the right side, members list forces that block change or achievement.
* Determine the weight of each, totaling 100% on each side.
* Use to promote driving forces and minimize restraining forces.

**Four A’s**

* Each person reads text and looks for four different A’s (determine assignments ahead of time, if longer reading have participants complete reading before gathering):
  + Assumptions
  + Agreements
  + Arguments
  + Applications
* Small groups first share at tables (can group as all with the same A, or create groups of 4 with one of each A)
* Groups chart big ideas and thoughts (chart paper or electronically)
* Facilitator calls on each table to share all four A’s or a particular A.

**Four Corners**

* Each corner has a poster with an essential question about the work.
* Questions may ask group members to identify with the question or move to a poster that forces a choice from a continuum.
* When arriving at poster, participants talk about why they selected it. If asked, the answer they the question on the chart.
* Participants can share responses out loud.

**Graduation Matters Montana (Helena example)**

**Greeting Circle**

* Greet the person on your left for one to two minutes.
* Then greet the next person, moving around the circle to each person in turn.
* As you move to the third person, the first person you greeted follows you becoming a “greeter,” and so on.
* The circle unfolds on itself.
* After the greeting, debrief the experience as a group. Ask, “How did you feel today?”
* Then ask, “What did you learn that will help you in our work?”

**Grounding** (Chadwick, 1989)

* In a go-around without interruption, each participant answers the three questions:
* Name, role, and relationship to a task.
* Expectations for session/meeting
* How I feel about the work or our task

**Head, Heart, and Hand** (Ginsberg & Wlodkowski, 2000)

* At the middle or end of a meeting, ask participants to complete the following statements.
* **Head:** One thing I will continue to think about as a result of ...
* **Heart:** One thing I am feeling right now ...
* **Hand:** One thing I will do as a result of our work and conversations ...

**Help Group**

* Based on the Consultancy Protocol-National School Reform Faculty)
* One person frames an issue and poses one question (3-5 minutes)
* Others in group ask clarifying questions only. (3-5 minutes)
* The group asks the presenter probing questions only (whys).
* The presenter clarifies but there is no discussion (5-10 minutes)
* The presenter moves to outside of circ1e but can hear.
* Participants talk about the work and issue presented: what they heard, what they might need to know, and what they think of the question being presented (5-] 0 minutes).
* The presenter moves back to the group and responds to the question, while everyone else listens. (3-5 minutes)
* The group talks openly and then c10ses discussion. (3-5 minutes)

**Here to There: Hopes and Fears** (Chadwick, 1989)

* What is the situation that inspires hope or fear?
* What is my worst fear?
* What is my best hope?
* What behaviors, actions, or strategies will help me realize my best hope?

**Here’s What…Now What…So What?** (Garmston & Wellman, 1999)

* Look at data and answer, “here’s what.” These are factual statements.
* Now move to “so what.” Discuss implications.
* Move to “now what?” Determine what to do about it.
* Create a plan of action.

**Hot and Not** (Garmston and Wellman, 1999)

* Summarize a proposal.
* Ask participants to describe what is hot (what they like).
* Ask participants to describe what is not (what they are struggling with).
* Record responses and look for patterns.

**Human Scavenger Hunt**

* Participants walk about the room looking for people who match the description in the box on the note catcher.
* It may be skill oriented or experiences such as "taught overseas, created common formative assessments, use a standards-based report card."

**Jigsaw** (Text Reading)

* Divide an article into parts and create a poster or visual with directions.
* Learning teams count off~ from three to four, with each taking a number that corresponds to part of the text reading.
* Each person reads a section and highlights big ideas. (Each will teach content to the learning team.)
* All is meet in one comer and talk about the big ideas. They are meeting in their "expert" group.
* After talking, they return to the main group with their knowledge. They then teach their learning team.
* After teaching, discuss the implications for the situation

**Keep, Drop, and Create**

* It is a process to determine priorities as part of essential learning or to create a shared feature. (See description on page 48 in DuFour, DuFour, Eaker, and Many’s *Learning by Doing*.)
* In conversations about the past, ask:
  + What do you want to retina from the past to contribute to the future?
  + What do you want to drop because it is getting in the way?
  + What do you want to create?

**Key Concept and Idea**

* Participants refocus and describe key ideas presented.
* They present key concepts.
* They do a check: Are we on the right track?

**Last Word** (Averette, Colorado Critical Friends Training)

* Members in a group of four read an article. Each picks a significant passage. The first participant reads the passage out loud. The participant says nothing more nor describes why she picked it.
* The other three participants have 1 minute each to respond to the passage.
* The first participant has 3 minutes to state why she chose that passage and to respond to the other participants' comments.
* Repeat with all participants and new passages.

**Learning Partners (**Garmston and Wellman, 1999) (Similar to two methods: Meet and Greet, Stand and Connect)

* Use a template at the beginning of the day with four to six visual images, such as seasons or animals.
* Ask each person to connect with a learning partner from another table.
* His job is to collect one name under each image and to remember this person' name.
* Upon request, the presenter asks participants to find their learning partners and connect with them about a reflective question.

**Line-Up**

* Ask team members to line up according to birth year.
* Have small groups share out memories of their education from that generation.

**Most Important Point (l\lIP)** (Garmston & Wellman, 1999)

* Participants reflect on content or the most important point of a text.
* They share with trios or within their group.
* Ask for others to share their comments on the person’s MIP. (It will take more time)

**Movie Titles**

* Ask team members to identify a movie title that captures their classroom experience this week

**My Life in Seven Stories #1** (Jennifer Allen)

* If you could choose only seven stories to tell from your life, what would they be?
* Generate titles

**Naïve Questions** (Garmston & Wellman, 1999)

* Speak with innocence and neutrality.
* Ask questions about planning, deciding, and implementing:
  + Who do we talk to first?
  + Who will decide this?
  + How will this decision be communicated?

**Nominal Group Technique** (Adapted from Texas LEAD Center)

The Nominal Group Technique (NGT) is a structured group process that is useful in situations in which individual judgments must be tapped and combined to arrive at decisions.

* **Review Meeting Objectives:** Review the outcomes of the meeting to begin.
* **Silent Generation**: Members independently generate ideas and write them down privately.
* **Round Robin Reporting:** Members share their ideas one at a time and the scribe records them on a chart.
* **Discussion for Clarification:** Members discuss each idea and ask clarifying questions.
* **Preliminary Ranking of Items by Importance:** Members individually rank items on the list.
* **Discussion of Preliminary Ranking:** Members briefly discuss the first ranking and arrive at a group consensus on the top priority items.
* **Final Consensus:** Members make a final ranking of the priority items by posting or verbally declaring their rankings. The highest ranked item (lowest score) becomes the group's decision.

**Note-Taking With Legends**

* Read text using key words or concepts.
* Participants highlight notes in different colors depending on the legend given (e.g., not proficient, proficient, advanced).

**One-Word Summary**

* At the end of a session, task, or meeting, ask participants for one word that best summarizes progress made or feelings about the session.

**Panels**

* Participants are divided into groups of four to six people
* Speaking 3-5 minutes, each describes a viewpoint: what I heard, how I feel about it, and what I learned.

**Parking Lot**

* A wall chart (the parking lot) lists issues, questions, concerns, and ideas from the team. These are ideas the team doesn’t want to lose, but are not relevant to the agenda. The parking lot allows the team to proceed while capturing topics for future consideration.

**Pennies**

* Provide pennies and ask team members to look at the dates.
* Ask members to share something that occurred for them in the year of the penny.
* It can be something about education or about life.

**Plus Delta** (Data Wise)

* On chart paper, white board, or electronically
* Ask: what went well? What should we change for the next time we meet?
* Provides opportunity for quick assessment, reminder, and readjustment of norms, meeting practices, protocols, etc.

**Post Cards or Flash Cards**

* Place postcards or flash cards with graphics in the center of the team's table, and ask participants to select one. They should talk about why it reminds them of. ... (whatever content you are working on) and why.

**Prioritizing**

* Dot votes
* Spend dots -each member has the same number.
* Members place their dots individually, in small groups, or entirely in one place, depending on how strongly he/she feels about each of the proposed items.
* Value 1 is low, 10 is high.

**Put Your Heads Together** (Garmston & Wellman, 1999)

* Frame a critical question after a reading or presentation.
* Ask each person to describe what they are doing to address it.

**Reflective Statements or Questions**

* Think ahead of time to increase the quality of the question.
* As participants to journal about the concept, their application with it, and what they think and learn.

**Round the Room and Back Again**

* One person gives a comment, followed by the person next to them.
* Each person takes a turn until getting back to the first speaker who describes what he learned from everyone.

**Round Robin (Similar to Round the Room and Back Again)**

* Start with one person and ask them to respond.
* Move to next person.
* Participants may pass.
* Next round robin, reverse the order to enhance the balance.

**Round Table**

* Tables are set up with a question or a concept for dialogue.
* Participants self-select and move to the table at the designated time.
* A facilitator manages dialogue and ensures balance and participation.
* One person starts, followed by the person sitting next to her.
* Each person speaks until finishing at the place of the person who started.

**Say Something** (Lipton & Wellman, 2004)

* Participants number off into teams of one to four participants.
* Everyone takes a few minutes, reads and highlights three to four key concepts from a text or list
* Team member 1 describes a key concept.
* Taking turns, team member 2, 3, and 4 add comments about 1's idea.
* Repeat the process as team number shares a new concept

**Snowball Fight** (Data Wise)

* Ask a question, have people write their answers on an 8.5\*11 paper
* Have participants crumple up their paper
* Participants use their paper (and others they pick up after they’ve been thrown) to have a snowball fight
* Participants read each answer to themselves, pick some to share with the whole group
* This is good for generating discussion and ideas in a format where anonymity may be helpful

**Stars & Stairs & Share**

* ***Stars (compliments)***
  + What is working well with the programs
* ***Stairs (critiques)*** 
  + What improvements or changes are needed to the program?
* **MC900339716[1]*Share (gifting)*** 
  + *What resources should we utilize to enhance Title I programming?*

**Stand and Connect (like Learning Partners)**

* Find a person sitting at a different table and greet one another.
* Discuss a question.

**Structured Effective Questions**

* What is already working?
* What makes it work?
* What is the objective we want to achieve?
* What are benefits of achieving the objective?
* What can we do to move closer to our objective or intended result?

**SUMI** (Data Wise)

**Temperature Read**

* During the course of a meeting or work session, check the temperature. Ask a question and ask each member to respond how they feel or if they agree with a statement or a solution. They may show a fist of five, hands up, or thumbs up.

**Text Rendering** (Lamer, 2007)

* Ask participants to read the excerpt or section of text and find a passage that is significant for you.
* In round one, each person shares a significant sentence and it is recorded.
* In round two, each person shares a significant phrase and it is recorded.
* In round three, each person shared a significant word and it is recorded.
* The participants discuss new insights about the text.

**Think, Pair, Share** (Lyman, 1981)

* **Think-Pair-Share** is a cooperative discussion strategy developed by Frank Lyman and his colleagues in Maryland. It gets its name from the three stages of student action, with emphasis on what students are to be DOING at each of those stages.
* **How Does It Work?**
  + **Think.** Provoke thinking with a question or prompt or observation. Participants should take a few moments (probably not minutes) just to THINK about the question.
  + **Pair.** Using designated partners or nearby neighbors, participants PAIR up to talk about the answer each came up with. They compare their mental or written notes and identify the answers they think are best, most convincing, or most unique.
  + **Share.** After participants talk in pairs for a few moments (again, usually not minutes), a facilitator calls for pairs to SHARE their thinking with the rest of the group - go around in round-robin fashion, call on each pair, or take answers as they are called out. Record responses.

**Think, Write, Trio Share**

* What is your big question or key understanding? Write it down and share with trio.

**Thinking Maps**

* Maps (different from graphic organizers) encourage learning and expand thinking. These visual tools teach thought processes and assist learners and teams.

**Three, Two, One**

Use as a check out and/or a method to summarize:

* Three big ideas you will bring back to your team
* Two key concepts you will apply
* One question you have

**Think, Write, Share**

* Ask participants to think about a concept or answer to a question.
* Ask them to write down a few thoughts.
* Ask them to share with a partner, triad, or group.

**Third Point** (Lipton & Wellman, 1999)

* Use charts or paper to draw group's attention of group (Third Point).
* Hold information to the side and direct their focus on the work (not each other).
* Focus on the content-the text on the chart or paper.
* List issues, feelings, and ideas.
* Co-create a plan.

**Three Truths and a Lie**

* Share four items about yourself~ three of which are the truth and one of which is a lie.
* The items could be about you personally or as an educator.
* The team tries to identify which one is a lie.

**Two Column Notes**

* Divide paper top to botton (two-columns), label columns as follows and have participants write responses to video, work, etc.
* Things I’d Like to Try
* Roadblocks

**Video Clips**

* Use video clips to make a point or provoke thinking.
* Determine questions ahead of time.

**Vivid Images** (Data Wise)

* Work in partners, or in whole group
* “Teller” describes an image in detail while the “listener” tries to picture what is being described
* “Listener” then looks at image and both share feedback on missing details and rich descriptions
* In whole group scenario, write down details of description as individuals, then share out and hear details from others that you may have missed
* Useful for building capacity on using the ladder of inference

**Wagon Wheel** (Stewart, 1994)

* Stand and count off 1, 2, 1, 2.
* 1s form an inner circle.
* 2s form an outer circle.
* Each 2 faces a 1.
* Facilitator asks participants to talk to the person they are facing and answer extended questions.
* Once 3 minutes pass and partners are done, the facilitator asks the] s to move two steps to the right. Now they are with a new partner.
* Repeat process with different partners.

**Walkabout Review** (Garmston & Wellman, 1999)

* Use a template with nine boxes for participants to walk about and gather three recollections from participants, three insights, or three applications.
* Each box should reflect a different person’s response.

**What do you see? What do you wonder?** (Data Wise)

* Capture specific observations and questions
* Useful in looking at data, teaching practices, and providing useful feedback

**Whip Around** (Garmston & Wellman, 1999)

* Quickly go around the room. The participants respond to a question with one word or a short phrase.

**World Cafe: Appreciative Inquiry**

Refer to Brown and Isaacs, *The World Café: Shaping Our Futures Through Conversations That Matter.* (2005). It is a process that allows participants to suspend judgment, create shared understanding, and discover new realities. Notes from the table of contents define the process:

* Determine the questions.
* Set the context.
* Explore questions.
* Encourage all to contribute.
* Listen for patterns and insights leading to deeper questions.
* Harvest and share collective discoveries.

***Classroom Instruction That Works***[***: Research-Based Strategies for Increasing Student Achievement (ASCD)(Robert J. Marzano, Debra J. Pickering, Jane E. Pollock)***](http://www.amazon.com/gp/redirect.html%3FASIN=0131195034%26tag=shsclassof198-20%26lcode=xm2%26cID=2025%26ccmID=165953%26location=/o/ASIN/0131195034%253FSubscriptionId=02ZH6J1W0649DTNS6002) **is a collection of effective strategies culled from a meta-analysis of decades of research on what works in classrooms to improve student learning and increase student achievement. The authors combined these effective strategies into nine broad categories:**

1. **Identifying Similarities and Differences**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Enhance students' understanding of and ability to use knowledge by engaging them in mental processes that involve identifying ways items are alike and different.

Generalizations from Research

1. Presenting students with explicit guidance in identifying similarities and differences enhances students’ understanding of and ability to use knowledge.
2. Asking students to independently identify similarities and differences enhances students’ understanding of and ability to use knowledge.
3. Representing similarities and differences in graphic or symbolic form enhances students’ understanding of and ability to use knowledge.
4. Identification of similarities and differences can be accomplished in a variety of ways. The identification of similarities and differences is a highly robust activity.

**Example Activities**

* Venn Diagrams
* Comparison Matrix
* Analogies Organizer

**Recommendations & Ideas**

1. Use comparing, classifying, metaphors, and analogies when having students compare similarities and differences.
2. Give students a model of the steps for engaging in the process.
3. Use a familiar context to teach students these steps.
4. Use Graphic Organizers as a visual tool to represent similarities and differences.
5. Guide students as they engage in this process. Gradually give less structure and less guidance.
6. **Summarizing and Note-Taking**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Enhance students' ability to synthesize information and organize it in a way that captures the main ideas and supporting details.

**Generalizations from Research**

1. Students must delete some information, substitute some information, and keep some information when they summarize.
2. To effectively delete, substitute, and keep information, students must analyze the information at a fairly deep level.
3. Being aware of the explicit structure of information is an aid to summarizing information.
4. Verbatim note taking is, perhaps, the least effective way to take notes.
5. Notes should be considered a work in progress.
6. Notes should be used as study guides for tests.
7. The more notes that are taken, the better.

**Example Activities**

* [Cornell Notes](http://ed421.com/edtech/docs/Cornell%20Notes.doc)
* Concept Maps
* Interactive Notebooks

**Recommendations & Ideas**

1. Teach students the rule-based summarizing strategy
2. Use summary frames
3. Teach students reciprocal teaching
4. Give students teacher-prepared notes
5. Teach students a variety of note-taking formats (like Cornell Notes)
6. Use combination notes
7. **Reinforcing Effort and Providing Recognition**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Enhance students' understanding of the relationship between effort and achievement by addressing students' attitudes and beliefs about learning.

Provide students with rewards or praise for their accomplishments related to the attainment of a goal.

**Generalizations from Research**

1. Not all students realize the importance of believing in effort.
2. Students can learn to operate from a belief that effort pays off even if they do not initially have this belief.
3. Rewards do not necessarily have a negative effect on intrinsic motivation.
4. Reward is most effective when it is contingent on the attainment of some standard of performance.
5. Abstract symbolic recognition (praise) is more effective than tangible rewards (candy, money).

**Example Activities**

* Class Website with student work
* Electronic Portfolios

**Recommendations & Ideas**

1. Personalize recognition
2. Use the “Praise, Prompt, and Praise” strategy
3. Use concrete symbols of recognition
4. Explicitly teach students about the importance of effort
5. Ask students to keep track of their effort in relationship to achievement
6. **Homework and PracticeFrom Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Extend the learning opportunities for students to practice, review, and apply knowledge.

Enhance students' ability to reach the expected level of proficiency for a skill or process.

**Generalizations from Research**

1. The amount of homework assigned to students should be different from elementary to high school.
2. Parental involvement should be kept to a minimum.
3. The purpose of homework should be identified and articulated.
4. If homework is assigned, it should be commented on.
5. Mastering a skill or a process requires focused practice.
6. While practicing, students should adapt and shape what they have learned.

**Example Activities**

* Class Websites/Blogs/Wikis
* PowerPoint Jeopardy (Could be developed online)

**Recommendations & Ideas**

1. Establish and communicate a homework policy
2. Design homework assignments that clearly articulate the purpose and outcome
3. Vary the approaches to providing feedback
4. Ask students to chart their speed and accuracy
5. Design practice that focuses on specific elements of a complex skill or process
6. Plan time for students to increase their conceptual understanding of skills or processes
7. **Nonlinguistic Representation**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Enhance students' ability to represent and elaborate on knowledge using mental images.

**Generalizations from Research**

1. A variety of activities produce nonlinguistic representations.
2. Nonlinguistic representations should elaborate on knowledge.

**IMPORTANT POINT –**

Student-generated nonlinguistic representations can be more powerful than teacher-generated or clip-art because…

* Students engage visual as well as verbal and written language
* Students engage in hands-on, active learning

**Example Activities**

* Visual Information -- graphs, graphics, diagrams, photos, drawings, maps, etc.
* 3D models

**Recommendations & Ideas**

1. Use graphic organizers to represent knowledge
2. Have students generate physical models of the knowledge (math manipulatives, models, etc.)
3. Have students generate mental pictures of the knowledge they are learning.
4. Have students generate pictographs to represent the term (hook in the brain)
5. Have students engage in kinesthetic activities representing the knowledge

**6. Cooperative Learning**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Provide students with opportunities to interact with each other in groups in ways that enhance their learning.

**Generalizations from Research**

1. Organizing groups based on ability levels should be done sparingly.
2. Cooperative learning groups should be rather small in size.
3. Cooperative learning should be used consistently and systematically, but should not be overused.

**Example Activities**

* Project-Based Learning
* Wikis
* Collaborative Writing

**Special Note:** Cooperative Learning IS NOT only "collaborative groups." Collaborative Groups are one form of Cooperative Learning, and Cooperative Learning is anything that involves students interacting with one another in a learning process.

**Recommendations & Ideas**

1. Use a variety of criteria to group students
2. Use informal, formal, and base groups
3. Keep groups to a manageable size
4. Combine cooperative learning with other classroom structures

**7. Setting Objectives and Providing Feedback**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Provide students a direction for learning and information regarding how well they are performing relative to a particular learning goal so that they can improve their performance.

**Generalizations from Research**

1. Setting instructional goals narrows what students focus on.
2. Teachers should encourage students to personalize the learning goals the teacher has identified for them.
3. Instructional goals should not be too specific.
4. Feedback should be corrective in nature.
5. Feedback should be timely.
6. Feedback should be specific to a criterion.
7. Students can effectively provide some of their own feedback.

**Example Activities**

* Rubrics
* Bulletin Board of Example Work -- a "visual rubric" that includes "A", "B", "C", and unacceptable quality work.
* Electronic Portfolios

**Recommendations & Ideas**

1. Set Learning Objectives or Goals that are specific but flexible
2. Contract with students to obtain specific learning objectives or goals
3. Use criterion-referenced feedback
4. Focus feedback on specific types of knowledge
5. Use student-led feedback

**8. Generating and Testing Hypotheses**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Enhance students' understanding of and ability to use knowledge by engaging them in mental processes that involve making and testing hypotheses.

**Generalizations from Research**

1. Hypotheses generation and testing can be approached in either a deductive or inductive manner.
2. Teachers should ask students to clearly explain their hypotheses and their conclusions.

**Example Activities**

* Systems Analysis
* Problem-Solving and Project-Based Learning
* Historical Investigation
* Invention
* Decision-Making

**Recommendations & Ideas**

1. Make sure students can explain their hypotheses and conclusions
2. Use a variety of structured tasks to guide students through generating and testing hypotheses
3. Plan time for students to increase their conceptual understanding of skills or processes

**9. Questions, Cues, and Advance Organizers**

**From Web 2.0 That Works: Marzano & Web 2.0 http://web2thatworks.com/index.php?title=Classroom\_Instruction\_That\_Works**

Enhance students' ability to retrieve, use, and organize what they already know about a topic.

**Generalizations From Research**

1. Cues and Questions should focus on what is important as opposed to what is unusual.
2. “Higher level” questions produce deeper learning than “lower level” questions.
3. Waiting briefly before accepting responses has the effect of increasing the depth of students’ answers.
4. Questions are effective learning tools even when asked before a learning experience.
5. Advance organizers should focus on what is important as opposed to what is unusual.
6. Higher level advance organizers produce deeper learning than lower level advance organizers.
7. Advance organizers are most useful with information that is not well organized.
8. Different types of advance organizers produce different results.

**Example Activities**

* Cornell Notes
* Graphic Organizers
* Rubrics
* Frayer Model
* Higher-Level Questioning and Wait-time
* Web/Concept Maps

**Recommendations & Ideas**

1. Use explicit cues
2. Ask questions that elicit inferences
3. Ask analytic questions
4. Use expository advance organizers
5. Use narrative advance organizers
6. Use Skimming as a form of advance organizers (SQ3R)
7. Use graphic advance organizers